

It is not believed that extensions of time or fees for net addition of claims are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 19-0036.

*Amendments*

*In the Claims:*

Please cancel claims 3, 4, 42 and 43 without prejudice or disclaimer.

Please substitute the following claim 1 for the pending claim 1:

1. (thrice amended) A transfection particle comprising one or more nucleic acid molecules condensed by organic cationic molecules, said particle being obtained by (1) condensing said one or more nucleic acid molecules with identical or different organic cationic precursor molecules without crosslinking any of said one or more nucleic acid molecules, and (2) thereafter obtaining cationic molecules by linking the precursor molecules to each other with one or more covalent bonds, wherein said one or more nucleic acid molecules remains condensed by said cationic molecules; wherein the cationic precursor molecules comprise:

a) at least one functional group for binding to one or more other of said precursor molecules, wherein said functional group is a dimerizable or polymerizable

functional group selected from the group consisting of thiols, acid hydrazides, aldehydes, amines, and ethylene residues that are suitably substituted to provide enamines upon reaction with an amine,

- b) at least one lipophilic residue,
- c) a non-toxic recipient backbone, and
- d) a cationic group for binding to nucleic acid molecules.

Please substitute the following claim 5 for the pending claim 5:

5. (twice amended) The transfection particle of claim 1, wherein the lipophilic residue is selected from the group consisting of lipophilic amides, esters and ethers.

Please substitute the following claim 6 for the pending claim 6:

6. (twice amended) The transfection particle of claim 1, wherein the functional group for binding to nucleic acid molecules is selected from an amine or derivative thereof.

Please add the following claim:

49.(new) A transfection particle comprising one or more nucleic acid molecules condensed by organic cationic molecules, said particle being obtained by (1) condensing said one or more nucleic acid molecules with identical or different organic cationic precursor molecules without crosslinking any of said one or more nucleic acid molecules, and (2) thereafter obtaining cationic molecules by linking the precursor

molecules to each other with one or more covalent bonds, wherein said one or more nucleic acid molecules remains condensed by said cationic molecules;  
wherein the organic cationic precursor molecule is represented by general formula I



wherein

$\text{R}_1$  denotes  $(\text{C}_1\text{-C}_{10}\text{-alkylene})\text{-SH}$ , wherein the alkylene radical may

represent a straight chained or branched hydrocarbon;

$\text{R}_2$  denotes  $\text{-NR}_4\text{R}_5$ ,  $\text{-NHR}_4\text{R}_5^+$ ,  $\text{-N(R}_4)_2\text{R}_5^+$ ,  $\text{-C(=NR}_4)\text{NR}_5\text{R}_6$ , guanidyl, ornithylamino, or  $\text{-C(=X)-C}_1\text{-C}_{10}\text{-alkylene}$ , wherein the alkylene radical may represent a straight chained or branched hydrocarbon and may be substituted by up to four amino radicals  $\text{-NR}_4\text{R}_5$  or a thiomonosaccharide;

$\text{R}_3$  denotes  $\text{C}_5\text{-C}_{30}\text{-alkyl}$ , straight chained or branched and optionally substituted with one or more halogen atoms or dialkyl amino groups, or  $\text{C}_5\text{-C}_{30}\text{-alkenyl}$ , straight chained or branched having up to ten  $\text{C=C}$ -double bonds and is optionally substituted with one or more halogen atoms or dialkyl amino groups, or

$\text{C}_5\text{-C}_{30}\text{-alkynyl}$ , straight chained or branched having up to ten  $\text{C}\equiv\text{C}$ -triple bonds and is optionally substituted with one or more halogen atoms or dialkyl amino groups, or

$\text{C}_6\text{-C}_{10}\text{-aryl}$  optionally substituted, or

$\text{C}_7\text{-C}_{16}\text{-aralkyl}$  optionally substituted, or a

C<sub>3</sub>-C<sub>30</sub>-alkyl-chain interrupted by up to 10 amino groups -NR<sub>4</sub>- and having optionally an amino-group which is optionally substituted by an amino acid;

R<sub>4</sub>, R<sub>5</sub> and R<sub>6</sub> denote independently from each other hydrogen or

C<sub>1</sub>-C<sub>4</sub>-alkyl;

X denotes O or S;

Y denotes C=O or C=S and

Z denotes O, S or -NR<sub>4</sub>-.